

# **AN APPARATUS AND METHOD FOR FILTERING VOLTAGE FOR AN ELECTROSTATIC PRECIPITATOR**

## **5 ABSTRACT OF DISCLOSURE**

An apparatus and method for controlling voltage applied to an electrostatic precipitator is disclosed. This apparatus includes a pulsating, direct current, voltage mechanism that is operable to receive power from a single phase, alternating current  
10 voltage source, and a spiral wound filter capacitor, wherein the pulsating, direct current, voltage mechanism is electrically connected in parallel to the spiral wound filter capacitor and the spiral wound filter capacitor is electrically connected in parallel to the electrostatic precipitator. Optionally, a resistor is present to lower the transient voltage rating of the spiral wound filter capacitor. A switching mechanism may be utilized to  
15 apply differing amounts of capacitance and inductance in order to apply a range of voltage waveforms to the electrostatic precipitator to potentially maximize particulate collection efficiency for the electrostatic precipitator.

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